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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,834	12/15/2000	Joel C. Vanderzee	D-2627/WOD	1552

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The Trane Company
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EXAMINER	
EUGENE, WANDA	
ART UNIT	**PAPER NUMBER**
2666	3

DATE MAILED: 04/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/738,834	VANDERZEE ET AL.	
	Examiner	Art Unit	
	Wanda Eugene	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 December 2000*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) *11-20* is/are allowed.

6)☐ Claim(s) *1-3 and 10* is/are rejected.

7)☐ Claim(s) *4-9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *4*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

The abstract uses ---means--- in line 5. Appropriate correction is requested.

Claim Objections

2. Claim 1 is objected to because of the following informalities:

It is suggested that claim 1 line 1 "A communication protocol" be modified to read ---A communication system using a communication protocol--- if it is the applicants intention to claim a communication system using a communication protocol, since communication protocol by itself is a set of rules or procedures.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 2 and 3 are rejected under 35 U.S.C. 102(e) as being anticipated by Kishigami et al. (U.S. 6,167,057).

Regarding claim **1**, Kishigami et al. discloses a communications protocol for a communications bus (**common data bus L** fig. 1) wherein messages are transmitted to a plurality of devices (**plurality of nodes 1-n and 11-14 connected to a common bus** fig. 1 col. 4 lines 7-9) communicating by means of a bus wherein each message includes a unique code indicating the end of the message (**end of message (EOM) coded in non-return to-zero (NRZ)** fig. 3. col. 4 line 24) and wherein that same unique code triggers a transfer of communications control to another device of the plurality of devices (**it is inherent that the start of the next message is triggered at the end of the previous message** fig. 5).

Regarding claim **2**, Kishigami et al. discloses, the transmitted messages are in first, second, and third formats, each of the first, second, and third formats having a distinguishable length (**the ML value is variable when its value is changed due to noise will effect the length of the**

frame, thus it is inherent that frames in different lengths are sent onto the bus col. 5 lines 30-34).

Regarding claim **3**, Kishigami et al. discloses message format comprises only the unique code, and indicates to the plurality of devices that communications control should be transferred to the next of the plurality of devices in a predetermined sequence (**an arbitration region is shown to have a priority, message length, destination id, message id, data, CRC and EOM indicating this message has ended and the next device can transmit** fig.3 col. 4 lines 47-56 and col. 7 lines 22-23).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kishigami in view of Rielly et al. (U.S. 5831848).

Kishigami teaches all the limitations of claim 1. Kishigami does not disclose communications control between the plurality of device is a hybrid of peer-to-peer and master/slave protocols. Rielly discloses, system of networks of the invention interconnects, on a peer-to-peer basis primary network nodes 103 comprised of microprocessor-based branch controllers, each of which controls, in a master-slave relationship over the branch network col. 2 lines 44-48. It would have been obvious to one of ordinary skill in the art at the time the invention was made to

modify Kishigami as suggested by Rielly in order to provide a master-slave like service in a peer-to-peer environment.

Allowable Subject Matter

7. Claims **4-9** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims **11 –20** are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 11, 16 and 19 address limitations of a protocol wherein each device transmits the unique code on the communications media in the sequence order if the device has nothing to report, transmits the sequence identifier of another device followed by data followed by the unique code if the device has information to report, and transmits the sequential identifier of another device followed by the unique code if the transmitting device desires to change out of sequence to a different device in the sequence order which was unfound in the prior art searched. Claims 12-15, 17, 18 and 20 are dependent upon the allowed claims.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vernon et al. (U.S. 5,088,024) Round-Robin protocol method for arbitrating access to a shared bus arbitration providing preference to lower priority units after bus access by a higher priority unit

Ilyadis et al. (U.S. 5,898,694) Method of round robin bus arbitration

Kalajainen (U.S. 5,132,967) Single competitor arbitration scheme for common bus

Krishnakumar et al. (U.S. 6,359,899) Priority access for real-time traffic in contention-based networks

Castello (U.S. 6,674,750) Apparatus and method for communicating time-division multiplexed data and packet data on a shared bus.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wanda Eugene whose telephone number is 703-305-8978. The examiner can normally be reached on M-F 7am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Q. Ngo can be reached on 703-305-4798. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

we

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